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ABSTRACT

This study examined the academic support needs of students at Rutgers University, New Brunswick. It is based on interviews with students and administrators of various academic support programs, a self-administered survey of 694 undergraduates, and institutional records included on the Student Record Data Base. The study found that not only do students need a great deal of help of various kinds in adjusting to and performing well in a university setting, they frequently do not find the help they need. Furthermore, when undergraduates look for academic assistance, they turn to those they know best, namely their friends. The help of professors, teaching assistants, and formal academic support services is sought much less frequently. The study also found that students are often confused about where to get the help they need. Students from disadvantaged backgrounds and minority groups who were part of the Educational Opportunity Fund (EOF) were found to utilize academic support services more frequently than non-EOF students. Three appendixes provide copies of the survey instrument, student and provider interview schedules, and a proposal to fund an academic support services project. Three notes contain additional references. (MDM)

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Introduction

Rutgers University, New Brunswick, is committed to providing every admitted student a fair chance to succeed academically. Rutgers admits promising graduates from high schools throughout the state. Many entering students are well prepared and move easily from high school to college. But others, particularly those from inner-city schools, find the transition difficult and require a certain amount of remedial or developmental assistance.

Major organizational units of the University including the central administration, the Faculty of Arts and Sciences - New Brunswick, undergraduate colleges and professional schools, and certain academic departments have developed their own academic support programs. At present there are 49 distinct retention and advancement programs on the New Brunswick campus alone.[1] The great majority of those programs are narrowly focussed and serve relatively small numbers of students (The University College Transition Program and the Cook College Elizabeth and Arthur Reich Minority Access Project, for example). There are only three large, open access, multi-site sources of academic support for undergraduates: the library, the Computer Information Service, and the Learning Resource Centers. Although the Writing Centers are open to all, limited budgets restrict the numbers of students who can actually be served. Other major programs are open only to narrower segments of the student body. For example, the Educational Opportunity Fund has family income guidelines and entrance to Gateway courses is limited to those who perform poorly on placement tests in English and/or math. These diverse projects developed whenever concerned individuals discovered internal and external funding opportunities. Systemic issues have received little attention, because no one individual actively oversees the entire set of support programs and also because the programs are administered by semi-autonomous organizational units. The existence of so many disparate programs creates a significant amount of confusion, duplication of effort, and underutilization of scarce resources.

Although an extensive academic support system has developed on the New Brunswick campus of Rutgers University, little is known about how well the system as a whole works. Individual programs have, of course, evaluated their own work, but those evaluations do not provide the overview necessary for planning. ASNAP was designed to answer certain basic questions:

- What kinds of help are needed and received?
- Where do students look for help?
- What students need the most help?
- What students are most likely to seek help and receive it?
- Why don't students make greater use of institutional support services?
- How distinctive are EOF students?

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[1] Richard A. Nurse, et. al., draft report, *Guide to Undergraduate Retention and Advancement Programs* (New Brunswick, N.J.: Rutgers, the State University of New Jersey, 1994).

With these questions answered it will be possible to begin thinking carefully about how the existing system might be improved.

Methodology

The results presented in this report come from three sources at Rutgers University, New Brunswick: a series of interviews with students and administrators of various academic support programs; a self-administered survey distributed to a random sample of undergraduate students; and institutional records included on the Student Record Data Base. The use of a multiple measurement, or triangulation, approach provides an opportunity to obtain convergent, complimentary and even contradictory results of the phenomenon being studied. Consequently, a richness is imparted to the analysis that would be lacking if only one method is applied to the study of the phenomenon in question .

The Survey of New Brunswick Students

Because so little is known about the structure and dynamics of the support system as a whole, it was decided to study the entire Rutgers-New Brunswick student body, rather than to focus on a narrower segment thought to be in greatest need of academic support services. The project was designed to gather descriptive data that should be useful by themselves, and can serve as benchmarks against which to measure the impact of programmatic and organizational changes which may be instituted at some future date. Because of the impracticality and inefficiency of questioning the entire population of New Brunswick undergraduate students about their needs for academic support, a random sample of these students was obtained and surveyed.

Survey Instrument and Administration

The survey instrument used for this study was a self-administered questionnaire composed almost entirely of closed-ended questions. An optional open-ended question that asked individual respondents to comment on any aspect of the academic support services at Rutgers University was also included in the questionnaire. The survey instrument included sections covering the need for and

use of Rutgers academic support services, the sources and quality of academic support, time budgets and biographical information such as parental education and income. The questionnaire used in the study is reproduced in Appendix A

The questionnaire was mailed to a random sample of 1,100 students via the Rutgers University - New Brunswick campus mail system. There were four mailings in all. The first mailing occurred on April 6, 1994, and included the questionnaire, a cover letter from Professor Robert Parelius, project director of the study, explaining the purpose of the survey and ensuring complete confidentiality, and a self-addressed return envelope. The second mailing was a postcard sent to all respondents a week later through the Rutgers University campus mail system. The postcard carried a message expressing gratitude to respondents who had completed and returned the questionnaire, while reminding others to do so in a timely fashion. A third mailing occurred on April 25, 1994, approximately two weeks after the postcard mailing, and included another copy of the questionnaire, a slightly revised version of the cover letter from Professor Parelius included in the first mailing, and a self-addressed return envelope. This mailing went only to those sampled students who had not responded to the two previous mailings. A fourth mailing also occurred after the end of the spring semester on June 3, 1994. Realizing that some students may not have received the previous campus mailings because of various problems inherent in the Rutgers University campus mail system[1], a final mailing via the United States postal system to the student's home address was begun on June 1, 1994. This last mailing consisted of a cover letter, the questionnaire and a self-addressed stamped envelope. The final follow-up effort consisted of making telephone calls during the middle and latter parts of June, 1994 to the homes of the students who had still not responded to the survey.

Survey Response

The sample of 1,100 was drawn from a population of 19,800 students during March, 1994. The population was defined as all undergraduate students attending one of the colleges on the New Brunswick campus during the 1993-1994 academic year. Thirteen students were not "reachable," meaning that they could not be contacted.

The number of useable questionnaires received was 694 for a response rate of 64.1 percent. Table 1 presents the return rate for each New Brunswick college. Return rates from Livingston College, Douglass College, Cook College, Rutgers College and the College of

[1] Each Rutgers undergraduate has a campus postal box that he or she is required to check at least once a week. However, we had no guarantee that students were in fact checking their respective postal boxes. Moreover, the fact that each postal box is shared by two students also increased the possibility of a particular surveyed student not receiving his or her questionnaire.

Engineering were similar, ranging from 62 to 67 percent. However, return rates were much lower for the Mason Gross School of the Arts (29 percent) and the College of Pharmacy (29 percent).

Insert Table 1 here

Sample Weights

Students who are part of the Educational Opportunity Fund (EOF) program were of particular interest in this study. Because these students account for only 7.7 percent of the population of students attending the undergraduate colleges of New Brunswick, a decision was made to oversample these students in order to ensure that enough of these students would be included in the study for future subgroup analyses. However, when discussing the results for the entire population of New Brunswick students, weights were applied to the sample so that the EOF students would not be overrepresented.

In the population that served as the target for our sample, 1,520 were EOF students and 18,280 were non-EOF students. However, in our sample, 178 were EOF students and 516 were non-EOF students. To arrive at the weights used in the study when discussing the University as a whole, the population proportion of EOF students was divided by the sample proportion of EOF students and the population proportion of non-EOF students was divided by the sample proportion of non-EOF students.

The Representativeness of the Sample

The extent to which the sample accurately reflects the characteristics of the student population as a whole can be seen in Table 2. In general the sample respondents were quite similar to their respective population profiles. Respondents were 10 percent African American, 19 percent Asian/Pacific Islander, 8 percent Latino, 61 percent White, and 3 percent Other. This compares to 8 percent African American, 17 percent Asian\Pacific Islander, 8 percent Latino, 64 percent White, and 2 percent Other among the New Brunswick undergraduate population. However, our sample had more females (59 percent to 52.2 percent) and less males (41 percent to 48 percent) than in the population. Thus the survey responses may be somewhat biased in reflecting the opinions of females somewhat more than those of males. In other respects the sample is quite representative of the population of New Brunswick students.

Table 1
Return Rate by Campus

	Number Sampled	Questionnaires Returned	Return Rate
Livingston	188	117	62.2
Douglass	170	116	68.2
Mason Gross	21	6	28.6
Cook	136	87	64.0
Rutgers	416	262	62.9
Engineering	115	77	67.0
Pharmacy	41	12	29.3

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Insert Table 2 here

Student and Support Provider Interviews

In order to supplement the survey data interviews were conducted with a convenience sample of undergraduates. Of the twenty students interviewed half were Gateway students and half were students working as clerks at a Learning Resource Center. The students varied in terms of gender, year in school, racial/ethnic background, and levels of academic accomplishment. The typical interview lasted almost one hour, although some where shorter and a few were considerably longer. The interviews were structured, meaning that the same set of questions was asked of all students (see Appendix B). However, the interviewers probed for further information whenever new and interesting topics arose. The students seemed pleased to be asked about their views and cooperated fully. They were paid for their time.

Semi-structured interviews were also conducted with seventeen individuals who provided academic support services in several academic support programs. Included among those interviewed were: Gateway teaching assistants and directors; Learning Resource Center administrators; Writing Center tutors; college deans; Educational Opportunity Fund counselors and administrators; and individuals connected with the Math/Science Learning Center, the University College Transition Program, and the Athletic Department. Together these individuals comprise a significant proportion of the entire academic support community. Provider interviews helped to broaden and balance student perspectives and provided many insights into the working relationships upon which the support system is built.

Survey Results

What kinds of help are needed and received?

A primary aim of this project was to provide an assessment of the need for and adequacy of existing support services. Table 3 presents an overview of the extent to which students need and

TABLE 2

Comparisons Between Respondents and Population (in percent)

	New Brunswick Undergraduates	
	Respondents	Population
Gender		
Female	59.4	52.2
Male	40.6	47.8
Total	100	100
N	(694)	(19800)
Race		
African American	9.8	8.4
Asian/Pacific Islander	18.6	16.6
Latino	7.8	8.5
White	60.8	64.5
Other	3.0	2.0
Total	100	100
N	(694)	(19697)
Citizen Status		
US Citizen	85.9	87.6
Non-US Citizen	14.1	12.4
Total	100	100
N	(694)	(19760)
Residence Status		
New Jersey	89.8	89.5
Non-New Jersey	10.2	10.5
Total	100	100
N	(694)	(19800)
EOF Status		
Yes	7.7	7.7
No	92.3	92.3
Total	100	100
N	(694)	(19800)
SAT Scores*		
Verbal	497	496
Math	574	575
N	(694)	(16633)
Age		
Traditional	87.4	84.2
Older	12.6	15.8
Total	100	100
N	(694)	(19800)

*For SAT Scores, average scores are shown.

receive academic support services in nine common problem areas. Students were asked to indicate with regard to each potential problem whether they (1) would have liked assistance, (2) received assistance or (3) required no assistance during the academic year. Column A of Table 3 shows that in all problem areas there were many students (ranging from a low of 22 percent regarding understanding readings to 43 percent regarding making career choices and mastering the material in one or more specific courses) who failed to get the help they would have liked. On the other hand Column B shows that many other students did find help in each area. In sum many students needed help and got it, but many other needy students failed to get help. Except with regard to use of the library and computers, a larger percentage of students failed to get help than got it.

A measure of overall extent of need is obtained by adding the percentages in columns A and B. The extent of need ranged from a high of 65 percent regarding "Making career choices" to a low of 31 percent regarding "Understanding readings." In order from greater to lesser need the other problem areas were: "Using computers (65 percent)," "Mastering the material in one or more specific courses (60 percent)," "Using the library (57 percent)," "Coping with stress (46 percent)," "Solving mathematical problems (45 percent)," "Studying for tests (45 percent)," and "Writing a paper (40 percent)." Clearly Rutgers presents undergraduates with academic demands that are sufficiently difficult to generate a large demand for various kinds of assistance.

Insert Table 3 here

Where do students look for help?

There are at least three distinct categories of sources from which students may choose to seek help: (1) primary group members -- friends, relatives, and informal study groups[1]; (2) those who teach specific courses -- professors and TAs; and (3) institutional support service programs. Inspection of the first column of Table 4 (sources used very often) indicates that students clearly prefer to get help from those in the first category. Nearly half of the respondents indicated that they very often sought help from individual friends. Following friends as the most frequently used source were: informal study groups (18 percent) and relatives (11 percent). Students less often sought assistance from their teachers -- professors (10 percent) and TAs (7 percent).

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[1] We assume that informal study groups are composed of friends, and are, therefore, correctly included in the primary group category.

TABLE 3

Kinds of Help Needed and Received (in percent)

Problem	A Would have liked Assistance	B Received Assistance	C No Assistance was Required	(N)
Making career choices	42.9	23.2	33.8	693
Mastering the material in one or more specific courses	42.9	17.0	40.1	693
Coping with stress	38.7	6.5	53.6	693
Using computers	31.2	33.7	35.1	693
Studying for tests	31.0	13.7	55.3	693
Using the library	23.5	33.5	43.0	691
Solving mathematical problems	23.1	22.3	54.6	693
Writing a paper	22.9	17.1	60.0	687
Understanding readings	21.5	9.7	68.8	693

Insert Table 4 here

The data in Table 4 also permit an analysis of *patterns of help-seeking.* All possible combinations of support sources that could be used by individuals were inspected. Thirty-five percent of the respondents indicated that they never used any of the support sources listed. Of those who did seek help, 65 percent got it from friends, relatives, TAs, professors or some combination of those sources. In other words two of every three students in need of assistance avoid all institutional sources.

Institutional support programs are used by relatively few students and appear to be the sources of last resort. However, this does not mean that institutional programs are unimportant. Indeed, they may be crucial to students who are relatively isolated from peers and/or reluctant to seek help from their instructors. However, the results of Table 4 do indicate that for most students the organizationally established programs constitute a third level of academic support after primary groups and instructors.

Sources Considered Most Helpful

Students were asked to identify the sources they felt were most helpful. The results are shown in Table 5. Not surprisingly the students indicated that the sources they used most frequently were also the most helpful. Friends (39 percent) ranked first by a large margin, followed in order by informal study groups (14 percent), professors (13 percent), teaching assistants (8 percent), and relatives (7 percent). None of the other sources was ranked most helpful by more than 4 percent of the respondents. The Learning Resource Centers, the Math/Science Learning Center, the Writing Center and the EOF program were considered the most helpful source by 2-4 percent of the undergraduates. Once again, University academic support services represent a third level of help after primary groups (friends and informal study groups) and instructors.

Insert Table 5 here

TABLE 4

Frequency of Use of Support Sources (in percent)

Support Source	Very Often	Sometimes	Never	N
Friend	48.5	46.8	4.6	693
Informal study group	18.0	50.0	32.1	693
Relative	10.9	37.1	52.0	693
Professor	9.9	67.9	22.2	693
Teaching Assistant	7.1	69.0	24.0	693
Math/Science Learning Center	6.5	24.2	69.3	693
Learning Resource Center	5.1	31.9	63.1	693
Writing Center	4.9	13.6	81.5	693
Librarian	4.8	49.3	45.9	693
Computer Info Center	3.9	28.6	67.4	693
Formally organized peer study group	3.7	21.2	75.1	693
EOF program	3.5	5.9	90.6	693
College Dean/Counselor	2.5	28.8	68.7	693
Dept. Advisor	2.1	24.0	73.9	693
Gateway course instructor	0.4	3.0	96.6	693
Tutor that I paid myself	0.4	4.6	95.1	693
All other sources	9.5	7.2	83.3	693

TABLE 5

Rank Order of Sources Named Most Helpful

Rank	Source	Percent	(N)
1	Friend	39.1	265
2	Study group formed by classmates	13.5	91
3	Professor	13.1	89
4	Teaching Assistant	8.1	55
5	Relative	6.6	45
6	Learning Resource Center	3.8	26
7	Math/Science Learning Center	3.6	24
8	Writing Center	2.3	16
8	EOF program	2.3	15
9	Computer Information Center	1.5	10
10	College dean or counselor	1.4	10
11	Departmental advisor	1.3	9
12	Librarian	1.1	7
13	Formally organized peer study group	1.0	7
13	All other sources	1.0	7
14	Tutor that I paid myself	0.4	2
15	Gateway course instructor	0.0	0

What students need the most help?

If support services are only required by a small, identifiable group, it is possible to target those services narrowly and organize them tightly. If, however, the need for help is widespread throughout the student population, quite different arrangements for the delivery of services must be made. In the latter case some may need intensive, ongoing support while others may need short term interventions. Thus, it is important to determine whether or not the need for academic support is highly concentrated or broadly dispersed.

The data presented in Table 6 show that students' need for help is systematically related to some social background characteristics and institutional ties, but not to others. That table shows the percentages of students with varying characteristics who indicated a need for help in each of the problem areas. The table also presents results of chi square tests of statistical significance.

Insert Table 6 here

There are few (three or less out of a maximum of nine) statistically significant differences in need for help between students varying on the following dimensions: age; gender, mother's education, father's education, college attended, and college class. The fact that parents' education is not more strongly related to students' academic need is somewhat unexpected. The data also indicate that the amount of help needed by first year students is significantly greater than that of students further along in their studies in only three areas: studying for tests, solving mathematical problems, and writing a paper. The fact that there is not a significant difference in more problem areas is surprising given the emphasis in the literature on the traumas of entering students.

Significant racial/ethnic differences emerge in all problem areas except regarding use of computers and the library. In general Latino and African-American students experience the greatest need for help, white students feel the least need, and Asian students are between. As expected family income is related to need. Students from impoverished and low-income families need more help than others. Because EOF assistance is only available to students from relatively low-income backgounds, it is not surprising that EOF students consistently report the need for help more frequently than others.

Student academic achievement is clearly related to our measures of need for help. Students who have relatively low math and verbal SAT scores report needing lots of help while those with very high scores feel the need for relatively little help. The same is true regarding grade point

TABLE 6

Kinds of Help Needed by Student Characteristics (in percent)

Student Characteristic	PROBLEM															
	Making Career Choices		Mastering the Material in One or More Specific Courses		Coping with Stress		Using Computers		Studying for Tests		Using the Library		Solving Mathematical Problems		Writing a Paper		Understanding Readings	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
AGE																		
Traditional Students	68	600	60	597	45	600	64	603	44	598	56	602	47	600	41	602	31	598
Non-Traditional Students	54	83	63	85	55	85	72	86	48	86	64	86	34	84	32	85	30	86
Chi Square Significance	P < .05		NS		NS		NS		NS		NS		P < .05		NS		NS	
GENDER																		
Female	66	407	62	406	54	409	67	409	47	407	62	410	48	409	42	409	32	407
Male	66	277	56	276	34	277	63	281	42	278	50	278	42	276	37	278	31	277
Chi Square Significance	NS		NS		P < .05		NS		NS		P < .05		NS		NS		NS	
RACE/ETHNICITY																		
African-American	68	68	75	67	67	67	57	68	59	67	56	68	62	68	46	66	42	66
Asian	74	126	70	126	47	129	70	129	58	128	61	129	48	128	56	128	34	129
Latino	53	54	72	52	73	52	72	54	56	54	56	54	58	54	54	54	46	53
White	65	414	54	415	38	416	63	418	37	415	55	416	41	414	33	418	27	415
Other	84	16	45	16	67	16	75	16	45	16	75	16	43	16	12	16	27	16
Chi Square Significance	P < .05		P < .05		P < .05		NS		P < .05		NS		P < .05		P < .05		P < .05	

TABLE 6 (Continued)

Kinds of Help Needed by Student Characteristics (in percent)

Student Characteristic	PROBLEM															
	Making Career Choices		Mastering the Material in One or More Specific Courses		Coping with Stress		Using Computers		Studying for Tests		Using the Library		Solving Mathematical Problems		Writing a Paper		Understanding Readings	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
MOTHER'S EDUCATION																		
Grade or middle school	61	45	73	45	59	46	63	46	55	46	55	46	60	45	55	45	42	46
High School	71	222	59	221	44	221	61	222	45	218	59	223	43	221	38	223	33	221
Some college	70	125	68	122	48	125	66	125	50	125	60	125	47	123	45	125	36	125
College graduate	63	191	57	192	41	190	70	194	39	192	54	192	45	191	37	191	26	190
Graduate or prof. degree	64	94	53	95	51	96	63	96	44	96	57	96	43	96	35	96	26	95
Chi Square Significance	NS		P < .05		NS		NS		NS		NS		NS		NS		NS	
FATHER'S EDUCATION																		
Grade or middle school	62	54	77	54	60	53	64	54	56	54	52	54	55	54	53	54	43	54
High School	72	154	66	152	47	155	62	155	48	155	55	155	49	152	40	154	31	155
Some college	69	88	62	88	43	87	67	88	46	87	50	88	44	87	38	88	30	87
College graduate	63	190	53	192	36	192	64	192	37	191	60	192	42	192	37	191	27	191
Graduate or prof. degree	67	184	56	183	51	186	66	188	44	186	59	188	43	187	40	188	33	186
Chi Square Significance	NS		P < .05		P < .05		NS		NS		NS		NS		NS		NS	

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TABLE 6 (Continued)

Kinds of Help Needed by Student Characteristics (in percent)

Student Characteristic	PROBLEM															
	Making Career Choices		Mastering the Material in One or More Specific Courses		Coping with Stress		Using Computers		Studying for Tests		Using the Library		Solving Mathematical Problems		Writing a Paper		Understanding Readings	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
FAMILY INCOME																		
Poverty level	78	88	79	87	60	87	71	88	57	87	60	88	51	87	50	88	40	88
$15,000 - $30,000	68	120	63	119	50	121	74	121	50	121	64	121	51	120	46	120	38	121
$30,000 - $60,000	65	144	59	144	41	143	65	144	34	143	51	144	37	144	32	144	27	144
$60,000 - $100,000	66	97	58	97	47	97	69	100	52	98	65	98	55	98	45	98	28	95
$100,000 - $200,000	72	83	50	84	41	84	55	83	41	84	56	84	35	84	30	83	29	84
> $200,000	59	91	58	88	34	90	53	91	46	90	51	91	50	90	43	91	31	90
Chi Square Significance	NS		P < .05		P < .05		P < .05		P < .05		NS		P < .05		P < .05		NS	
COLLEGE																		
Cook	65	92	67	92	46	91	65	92	55	89	59	91	57	92	33	92	31	92
Douglass	63	119	60	120	51	120	66	120	48	119	53	121	51	120	36	121	35	119
Engineering	63	81	70	80	38	81	53	82	49	81	46	81	43	81	45	81	35	81
Livingston	68	111	57	108	48	110	70	111	40	111	60	111	51	111	46	111	34	108
Mason Gross	57	7	57	7	57	7	95	7	38	7	81	7	31	4	43	7	43	7
Pharmacy	67	26	57	27	45	28	68	28	50	28	58	28	35	27	43	27	34	28
Rutgers	69	248	56	248	44	249	65	249	40	249	60	249	39	249	40	248	26	249
Chi Square Significance	NS		NS		NS		NS		NS		NS		P < .05		NS		NS	

TABLE 6 (Continued)

Kinds of Help Needed by Student Characteristics (in percent)

Student Characteristic	PROBLEM															
	Making Career Choices		Mastering the Material in One or More Specific Courses		Coping with Stress		Using Computers		Studying for Tests		Using the Library		Solving Mathematical Problems		Writing a Paper		Understanding Readings	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
COLLEGE CLASS																		
First Year	64	171	66	171	39	171	67	173	54	170	61	173	60	170	53	173	37	171
Second Year	68	225	62	221	49	224	64	226	43	224	53	226	43	224	40	224	33	224
Third Year	70	187	55	188	49	190	62	190	41	190	58	189	39	190	33	190	26	188
Fourth Year	59	99	55	100	45	100	69	100	41	100	57	100	37	100	30	100	26	100
Chi Square Significance	NS		NS		NS		NS		P < .05		NS		P < .05		P < .05		NS	
EOF RECIPIENT																		
EOF	76	53	81	53	63	53	67	53	67	53	61	53	62	53	69	53	54	53
Non-EOF	65	630	58	629	44	632	65	636	43	631	57	635	44	631	38	634	29	631
Chi Square Significance	NS		P < .05		NS		NS		P < .05		NS		NS		P < .05		P < .05	
COLLEGE GPA																		
00 - 1.99	71	60	83	91	64	61	64	61	81	61	51	61	63	61	65	61	46	61
2.0 - 2.49	75	119	82	117	53	119	60	121	57	118	50	121	54	121	49	121	40	118
2.5 - 2.99	71	201	68	202	48	200	70	202	52	201	63	202	50	202	38	201	34	201
3.0 - 3.49	62	188	45	188	39	191	62	191	32	190	58	191	42	187	33	190	27	189
3.5 - 4.00	53	112	32	111	37	112	65	112	20	112	56	111	24	11	30	112	14	112
Chi Square Significance	P < .05		P < .05		P < .05		NS		P < .05		NS		P < .05		P < .05		P < .05	

TABLE 6 (Continued)

Kinds of Help Needed by Student Characteristics (in percent)

Student Characteristic	PROBLEM															
	Making Career Choices		Mastering the Material in One or More Specific Courses		Coping with Stress		Using Computers		Studying for Tests		Using the Library		Solving Mathematical Problems		Writing a Paper		Understanding Readings	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
SAT - MATH																		
290 - 390	85	18	81	18	83	18	79	18	60	18	71	18	76	18	77	18	60	18
400 - 490	68	98	70	95	51	98	53	98	49	97	51	97	63	97	45	98	34	98
500 - 590	69	211	62	213	45	210	67	213	48	210	61	214	57	213	40	213	35	210
600 - 690	66	203	52	204	41	206	63	207	42	206	54	206	32	204	35	204	27	204
700 - 790	59	55	56	53	39	55	61	55	36	55	50	55	30	55	34	55	23	55
Chi Square Significance	NS		P < .05		P < .05		NS		NS		NS		P < .05		P < .05		P < .05	
SAT - VERBAL																		
290 - 390	71	69	67	69	56	70	69	70	55	70	53	70	48	70	65	70	44	70
400 - 490	73	204	68	201	53	202	91	205	55	203	53	205	53	204	48	230	41	203
500 - 590	63	220	59	223	37	221	64	223	38	220	57	221	44	220	29	223	27	221
600 - 690	60	76	37	75	38	76	64	76	31	76	62	76	41	76	21	76	13	75
700 - 790	40	6	20	6	40	6	20	6	20	6	60	6	20	6	20	6	0	6
Chi Square Significance	NS		P < .05		P < .05		NS		P < .05		NS		NS		P < .05		NS	

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averages. Those with very low grade point averages need lots of help while those who getting high grades require little. Thus, the data clearly indicate that students from economically disadvantaged and minority backgrounds will have to receive substantial help in order to succeed.

In order to look more closely at these issues, a summary measure of need was constructed[1] and statistical analyses of variance were performed. The results are presented in Tables 7-1 and 7-2. In two respects the analysis of variance confirms the findings presented in Table 6. Again need is unrelated to student age and college affiliation. However, in this analysis all other student characteristics emerge as significant factors. Table 7-2 includes eta squared, a measure of the percent of variance in a dependent variable which is explained by an independent variable. The significant factors In descending order of importance are: college grade point average (11.5%), SAT-verbal (6.5%), SAT-math (5.6%), race/ethnicity (5.3%), family income (5.0%), EOF status (3.4%), gender (1.7%), college class (1.6%), mother's education (1.4%) and father's education (1.4%).

Insert Tables 7-1 and 7-2 here

What students receive the most help?

It is now clear that minority status, economic disadvantage, and low academic achievement are strongly related to need for academic support. But do those in need actually receive help? Stated differently, are there systematic differences in terms of social background or institutional ties between those in need who actually receive help and those that do not? If so unevenness in the delivery of services may require special attention. If student characteristics are unrelated to receipt of assistance, help would appear to be equally available to all in need. Data on these issues are presented in Table 8: Kinds of Help Received by Student Characteristics. This table presents data only on students who indicated that they would have liked help or received it. Students who indicated that they did not require help were excluded.

---

[1] Students were presented with a list of nine common academic problems and asked to indicate for each whether they received assistance, would have liked assistance or considered assistance unnecessary (see Appendix A). The problems were: writing a paper; solving mathematical problems; studying for tests; coping with stress; understanding assigned readings; using the library; making career choices; and using computers. Responses were coded in the following manner: no assistance required, 0; would have liked assistance, 1; received assistance, 1. Then responses for the nine items were summed, yielding a measure with a range of 0 to 9.

TABLE 7-1

Means and Standard Deviations of Amount of Assistance Required for Selected Student Characteristics

Background Measure	N	Mean	Standard Deviation
AGE			
Traditional Students	604	4.5	2.2
Non-Traditional Students	86	4.5	2.5
GENDER			
Female	410	4.8	2.2
Male	281	4.2	2.4
RACE/ETHNICITY			
African-American	68	5.3	2.1
Asian	129	5.1	2.3
Latino	54	5.3	2.2
Other	16	4.7	1.7
White	419	4.1	2.2
MOTHER'S EDUCATION			
Grade or middle school	46	5.2	2.4
High School	223	4.5	2.2
Some college	125	4.9	2.1
College graduate	194	4.3	2.3
Graduate or professional degree	96	4.3	2.2

TABLE 7-1 (Continued)

Means and Standard Deviations of Amount of Assistance Required for Selected Student Characteristics

Background Measure	N	Mean	Standard Deviation
FATHER'S EDUCATION			
Grade or middle school	54	5.2	2.4
High School	156	4.7	2.3
Some college	88	4.5	2.1
College graduate	192	4.2	2.4
Graduate or professional degree	188	4.5	2.2
FAMILY INCOME			
Poverty level	88	5.4	2.2
$15,000 - $30,000	121	5.0	2.4
$30,000 - $60,000	144	4.1	2.1
$60,000 - $100,000	99	4.7	2.1
$100,000 - $200,000	84	4.1	2.0
> $200,000	91	4.2	2.3
COLLEGE			
Cook	92	4.8	2.1
Douglass	121	4.6	2.4
Engineering	82	4.3	2.3
Livingston	111	4.7	2.3
Mason Gross	7	4.9	1.8
Pharmacy	28	4.4	3.0
Rutgers	249	4.4	2.2
COLLEGE CLASS			
First Year	173	5.0	2.3
Second Year	228	4.5	2.2
Third Year	190	4.3	2.2
Fourth Year	100	4.2	2.4

TABLE 7-1 (Continued)

Means and Standard Deviations of Amount of Assistance Required for Selected Student Characteristics

Background Measure	N	Mean	Standard Deviation
EDUCATIONAL OPPORTUNITY FUND RECIPIENT			
EOF	53	6.0	2.3
Non-EOF	637	4.4	2.2
COLLEGE GPA			
00 - 1.99	61	5.9	2.0
2.0 - 2.49	121	5.1	2.1
2.5 - 2.99	203	4.9	2.2
3.0 - 3.49	191	4.0	2.3
3.5 - 4.00	112	3.3	1.9
SAT - MATH			
290 - 390	18	6.7	1.8
400 - 490	98	4.8	2.2
500 - 590	214	4.8	2.3
600 - 690	207	4.1	2.3
700 - 790	55	3.9	1.9
SAT - VERBAL			
290 - 390	70	5.3	2.5
400 - 490	207	5.0	2.2
500 - 590	223	4.2	2.1
600 - 690	~~78~~	3.7	2.0
700 - 790	6	2.4	2.5

TABLE 7-2

Analysis of Variance on Amount of Assistance Required for Selected Student Characteristics

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	P	ETA SQUARED (%)
AGE						
Groups	1	0.41	0.41	.079	.778	0.0
Error	689	3568.36	5.18	---	---	
Total	690	3568.77	5.17	---	---	
GENDER						
Groups	1	61.42	61.42	12.061	.001*	1.7
Error	689	3507.36	5.09	---	---	
Total	690	3568.78	5.17	---	---	
RACE/ETHNICITY						
Groups	4	186.82	46.70	9.426	.000*	5.3
Error	680	3370.46	4.96	---	---	
Total	684	3557.28	5.20	---	---	
MOTHER'S EDUCATION						
Groups	4	49.75	12.44	2.434	.046*	1.4
Error	678	3465.75	5.11	---	---	
Total	682	3515.50	5.16	---	---	
FATHER'S EDUCATION						
Groups	4	49.52	12.38	2.405	.048*	1.4
Error	674	3468.46	5.15	---	---	
Total	678	3517.98	5.19	---	---	

TABLE 7-2 (Continued)

Analysis of Variance on Amount of Assistance Required for Selected Student Characteristics

SOURCE	DF	SQUARES	MEAN SQUARE	F	P	(%)
FAMILY INCOME						
Groups	5	158.72	31.74	6.510	.000*	5.0
Error	623	3035.32	4.88	---	---	
Total	628	3194.04	5.09	---	---	
COLLEGE						
Groups	6	19.35	3.23	.621	.713	0.5
Error	684	3549.42	5.19	---	---	
Total	690	3568.77	5.17	---	---	
COLLEGE CLASS						
Groups	3	58.07	19.36	3.794	.010*	1.6
Error	686	3501.02	5.10	---	---	
Total	689	3559.09	5.17	---	---	
EOF						
Groups	1	122.83	122.83	24.551	.000*	3.4
Error	689	3445.94	5.00	---	---	
Total	690	3568.77	5.17	---	---	
GPA						
Groups	4	407.25	101.81	22.111	.000*	11.5
Error	684	3149.09	4.60	---	---	
Total	688	3556.34	5.17	---	---	

TABLE 7-2 (Continued)

Analysis of Variance on Amount of Assistance Required for Selected Student Characteristics

SOURCE	DF	SQUARES	MEAN SQUARE	F	P	(%)
SAT - MATH						
Groups	4	172.29	43.07	8.762	.000*	5.6
Error	586	2882.19	4.92	---	---	
Total	590	3054.48	5.18	---	---	
SAT - VERBAL						
Groups	4	194.23	48.56	9.994	.000*	6.5
Error	577	2801.09	4.86	---	---	
Total	581	2995.32	5.16	---	---	

*P < .05

Insert Table 8 here

Here the results are dramatically different from those presented earlier. There are very few statistically significant differences in the kinds of help received between students with different backgrounds. Only on one dimension -- college class -- are there significant differences in more than two of the nine problem areas. Thus, this evidence strongly suggests that students in need of help, no matter what their characteristics, are equally likely to find it.

A summary measure of amount of help received was constructed in order to look at the issue even more closely.[1] Table 9-1 presents the means and standard deviations and Table 9-2 presents analysis of variance results. Here statistically significant differences do appear with regard to race/ethnicity, father's education, EOF status and SAT-math scores. The relationships are not strong however, as indicated by the values of eta squared: race/ethnicity (1.9%), father's education (1.8%), EOF status (.9%), and SAT-math (3.1%). Thus, eight of the twelve student background characteristics are not related to actual receipt of help while another four are quite weakly related.

Insert Tables 9-1 and 9-2 here

Why don't students use institutional support services more often?

It has already been shown that many students want help but do not get it. Why don't students in need make greater use of the academic support services available? The overwhelming response shown in Table 10 was, "I decided to deal with the problem on my own." Ninety-eight percent of the students cited self-reliance at least sometimes and a full 80 percent stated that this was their reason for not using university support services all or most of the time. Clearly, the old fashioned virtue of self-reliance remains strong at Rutgers University in 1994. However, student assertions of self-reliance tell us little about possible shortcomings in the academic support network.

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[1]This measure of amount of help received was constructed by coding "Received Help" responses as 1 and "Would have Liked Help" as 0 and summing across all nine problem items.

TABLE 8

Kinds of Help Received by Student Characteristics (in percent)

Student Characteristic	PROBLEM															
	Making Career Choices		Mastering the Material in One or More Specific Courses		Coping with Stress		Using Computers		Studying for Tests		Using the Library		Solving Mathematical Problems		Writing a Paper		Understanding Readings	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
AGE																		
Traditional Students	36	407	29	355	14	267	51	386	3	265	59	337	49	283	43	107	31	188
Non-Traditional Students	24	45	23	54	15	46	57	62	19	41	55	55	55	28	41	27	35	26
Chi Square Significance	NS		NS		NS		NS		NS		NS		NS		NS		NS	
GENDER																		
Female	35	269	30	254	11	221	49	272	31	190	56	252	48	195	47	37	33	129
Male	35	182	26	155	22	93	56	175	30	116	64	140	50	115	171	103	29	84
Chi Square Significance	NS		NS		P < .05		NS		NS		NS		NS		NS		NS	
RACE/ETHNICITY																		
African-American	39	46	34	50	21	45	50	38	38	39	68	38	60	42	62	31	40	28
Asian	36	93	28	88	14	61	43	90	29	74	48	79	47	61	36	72	18	43
Latino	44	28	20	37	7	38	54	39	28	30	62	30	47	29	62	29	32	24
White	35	271	28	224	16	156	57	264	31	154	61	230	47	171	39	139	33	113
Other	2	13	22	7	0	11	3	12	22	7	45	12	59	7	16	2	43	4
Chi Square Significance	NS		NS		NS		P < .05		NS		NS		NS		P < .05		NS	

TABLE 8 (Continued)

Kinds of Help Received by Student Characteristics (In percent)

Student Characteristic	PROBLEM															
	Making Career Choices		Mastering the Material in One or More Specific Courses		Coping with Stress		Using Computers		Studying for Tests		Using the Library		Solving Mathematical Problems		Writing a Paper		Understanding Readings	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
MOTHER'S EDUCATION																		
Grade or middle school	28	27	28	33	19	37	54	29	21	25	65	25	58	27	59	24	19	19
High School	37	156	32	131	17	97	50	135	28	98	62	131	42	95	46	86	30	72
Some college	34	87	24	83	14	60	53	83	33	62	55	75	41	58	42	56	38	45
College graduate	35	120	32	109	14	78	55	135	33	74	53	104	57	86	42	71	41	50
Graduate or prof. degree	34	60	21	50	10	49	46	60	40	42	63	55	57	41	31	33	12	25
Chi Square Significance	NS		NS		NS		NS		NS		NS		NS		NS		NS	
FATHER'S EDUCATION																		
Grade or middle school	36	33	23	41	17	32	51	35	20	30	67	28	54	30	58	28	24	23
High School	30	111	29	101	18	73	47	96	30	75	52	85	41	75	37	62	27	49
Some college	35	61	36	55	12	37	50	59	26	40	60	44	49	39	44	34	52	26
College graduate	30	120	24	102	14	70	49	123	25	71	53	115	43	80	35	70	33	51
Graduate or prof. degree	44	123	30	102	12	94	58	124	44	81	66	112	62	81	49	76	25	61
Chi Square Significance	NS		NS		NS		NS		P < .05		NS		NS		NS		NS	

TABLE 8 (Continued)

Kinds of Help Received by Student Characteristics
(In percent)

Student Characteristic	PROBLEM															
	Making Career Choices		Mastering the Material in One or More Specific Courses		Coping with Stress		Using Computers		Studying for Tests		Using the Library		Solving Mathematical Problems		Writing a Paper		Understanding Readings	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
FAMILY INCOME																		
Poverty level	33	69	27	69	13	53	43	62	25	50	59	53	54	45	45	44	27	35
$15,000 - $30,000	37	81	27	75	16	61	43	89	25	61	58	78	37	61	49	56	30	47
$30,000 - $60,000	33	94	30	85	24	59	56	93	25	48	56	73	46	53	37	46	36	39
$60,000 - $100,000	25	64	34	56	3	46	57	68	32	51	55	64	40	54	49	44	24	26
$100,000 - $200,000	44	60	27	42	14	35	60	46	46	35	58	47	67	30	35	25	40	25
> $200,000	37	54	27	51	17	30	54	48	36	41	68	46	69	45	45	39	36	28
Chi Square Significance	NS		NS		NS		NS		NS		NS		P < .05		NS		NS	
COLLEGE																		
Cook	34	59	33	62	16	42	55	59	35	49	68	54	46	52	46	30	27	28
Douglass	39	75	33	72	11	62	55	79	32	57	53	64	53	61	36	43	37	42
Engineering	35	51	25	56	16	31	36	44	32	40	58	37	63	35	44	36	23	28
Livingston	29	76	28	62	11	53	55	77	23	45	64	67	46	56	46	51	33	36
Mason Gross	100	4	33	4	0	4	80	6	50	2	71	5	0	1	0	3	45	3
Pharmacy	25	17	26	15	22	13	27	19	26	14	32	16	45	10	39	12	52	10
Rutgers	36	170	26	138	17	109	54	162	31	99	59	148	46	97	45	100	28	66
Chi Square Significance	NS		NS		NS		NS		NS		NS		NS		NS		NS	

TABLE 8 (Continued)

Kinds of Help Received by Student Characteristics
(In percent)

Student Characteristic	PROBLEM															
	Making Career Choices		Mastering the Material in One or More Specific Courses		Coping with Stress		Using Computers		Studying for Tests		Using the Library		Solving Mathematical Problems		Writing a Paper		Understanding Readings	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
COLLEGE CLASS																		
First Year	21	110	24	113	13	67	50	115	32	92	57	105	45	102	55	91	31	64
Second Year	27	154	28	137	12	109	55	146	31	96	56	120	62	96	38	91	34	74
Third Year	51	130	30	104	19	93	48	118	29	77	61	110	43	74	31	62	15	48
Fourth Year	50	58	36	55	14	45	56	69	29	41	64	57	40	37	43	30	49	26
Chi Square Significance	P < .05		NS		NS		NS		NS		NS		P < .05		P < .05		P < .05	
EOF RECIPIENT																		
EOF	34	40	22	43	17	33	50	36	30	36	60	33	53	33	61	37	33	29
Non-EOF	35	412	29	366	14	280	52	412	31	270	59	360	49	278	40	239	31	185
Chi Square Significance	NS		NS		NS		NS		NS		NS		NS		P < .05		NS	
COLLEGE GPA																		
00 - 1.99	19	43	26	51	14	39	50	39	22	50	56	31	39	13	43	40	30	28
2.0 - 2.49	32	89	23	96	14	63	49	73	29	68	71	60	55	21	47	59	28	48
2.5 - 2.99	32	142	28	138	14	96	50	142	33	104	63	127	48	32	42	77	27	69
3.0 - 3.49	45	118	35	86	17	74	52	119	32	61	54	110	45	26	37	63	37	51
3.5 - 4.00	38	60	32	36	13	42	59	73	44	22	47	62	67	27	48	34	31	16
Chi Square Significance	P < .05		NS		NS		NS		NS		P < .05		NS		NS		NS	

TABLE 8 (Continued)

Kinds of Help Received by Student Characteristics
(In percent)

Student Characteristic	PROBLEM															
	Making Career Choices		Mastering the Material in One or More Specific Courses		Coping with Stress		Using Computers		Studying for Tests		Using the Library		Solving Mathematical Problems		Writing a Paper		Understanding Readings	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
SAT - MATH																		
290 - 390	67	15	30	14	10	15	48	14	34	11	71	12	58	34	53	14	34	11
400 - 490	42	67	21	67	8	50	56	52	29	47	66	49	48	108	58	44	35	33
500 - 590	34	147	34	132	19	95	55	142	34	100	59	130	52	97	50	85	33	74
600 - 690	34	134	27	107	13	83	47	130	26	86	54	111	48	31	32	71	26	55
700 - 790	35	32	17	30	0	21	48	33	63	20	59	27	0	1	33	19	10	12
Chi Square Significance	NS		NS		NS		NS		P < .05		NS		NS		P < .05		NS	
SAT - VERBAL																		
290 - 390	41	48	24	46	12	39	56	48	28	39	73	37	36	5	61	45	38	31
400 - 490	35	150	26	136	13	108	48	125	26	112	58	110	46	22	38	96	25	82
500 - 590	34	139	31	130	16	82	53	142	41	83	57	126	53	44	39	64	30	59
600 - 690	41	46	36	27	9	29	54	48	47	24	58	47	47	24	62	16	38	10
700 - 790	0	2	0	1	0	2	100	1	0	1	0	4	69	6	0	1		
Chi Square Significance	NS		NS		NS		NS		NS		NS		NS		P < .05		NS	

TABLE 9-1

Means and Standard Deviations of Amount of Assistance Received for Selected Student Characteristics

Background Measure	N	Mean	Standard Deviation
AGE			
Traditional Students	590	1.8	1.7
Non-Traditional Students	80	1.7	1.8
GENDER			
Female	400	1.9	1.7
Male	269	1.7	1.7
RACE/ETHNICITY			
African-American	68	2.3	2.1
Asian	129	1.8	1.6
Latino	54	2.0	2.0
Other	16	1.0	1.4
White	397	1.7	1.6
MOTHER'S EDUCATION			
Grade or middle school	45	2.1	1.8
High School	221	1.8	1.7
Some college	122	1.9	2.0
College graduate	185	1.8	1.6
Graduate or professional degree	91	1.7	1.6

TABLE 9-1 (Continued)

Means and Standard Deviations of Amount of Assistance Received for Selected Student Characteristics

Background Measure	N	Mean	Standard Deviation
FATHER'S EDUCATION			
Grade or middle school	52	2.1	2.0
High School	155	1.6	1.6
Some college	87	1.8	1.8
College graduate	183	1.6	1.5
Graduate or professional degree	181	2.1	1.8
FAMILY INCOME			
Poverty level	87	2.0	1.9
$15,000 - $30,000	120	1.8	1.8
$30,000 - $60,000	141	1.6	1.7
$60,000 - $100,000	96	1.8	1.6
$100,000 - $200,000	82	1.8	1.7
> $200,000	85	2.0	1.6
COLLEGE			
Cook	90	2.0	1.9
Douglass	116	1.9	1.7
Engineering	80	1.6	1.5
Livingston	110	1.8	1.8
Mason Gross	7	2.5	1.4
Pharmacy	27	1.4	2.0
Rutgers	239	1.8	1.6
COLLEGE CLASS			
First Year	166	1.9	1.7
Second Year	221	1.8	1.7
Third Year	185	1.7	1.7
Fourth Year	96	1.9	1.7

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TABLE 9-1 (Continued)

Means and Standard Deviations of Amount of Assistance Received for Selected Student Characteristics

Background Measure	N	Mean	Standard Deviation
EDUCATIONAL OPPORTUNITY FUND RECIPIENT			
EOF	53	2.4	2.0
Non-EOF	616	1.8	1.7
COLLEGE GPA			
00 - 1.99	61	1.9	1.9
2.0 - 2.49	119	2.0	1.8
2.5 - 2.99	201	1.9	1.8
3.0 - 3.49	184	1.7	1.6
3.5 - 4.00	101	1.6	1.5
SAT - MATH			
290 - 390	18	2.6	2.5
400 - 490	97	1.9	1.7
500 - 590	209	2.1	1.7
600 - 690	199	1.5	1.7
700 - 790	52	1.5	1.3
SAT - VERBAL			
290 - 390	70	2.3	2.2
400 - 490	204	1.8	1.6
500 - 590	214	1.8	1.7
600 - 690	73	1.7	1.4
700 - 790	4	0.3	0.6

TABLE 9-2

Analysis of Variance on Amount of Assistance Received for Selected Student Characteristics

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	P	ETA SQUARED (%)
AGE						
Groups	1	0.52	0.52	.180	.672	0.0
Error	667	1945.19	2.92	---	---	
Total	668	1945.71	2.91	---	---	
GENDER						
Groups	1	2.70	2.7	.929	.336	0.1
Error	667	1943.01	2.91	---	---	
Total	668	1945.71	2.91	---	---	
RACE/ETHNICITY						
Groups	4	35.97	8.99	3.112	.015 *	1.9
Error	659	1903.41	2.89	---	---	
Total	663	1939.38	2.93	---	---	
MOTHER'S EDUCATION						
Groups	4	6.08	1.52	.518	.772	0.3
Error	658	1931.35	2.93	---	---	
Total	662	1937.43	2.93	---	---	
FATHER'S EDUCATION						
Groups	4	34.47	8.62	3.034	.017 *	1.8
Error	652	1853.57	2.84	---	---	
Total	656	1888.04	2.88	---	---	

TABLE 9-2 (Continued)

Analysis of Variance on Amount of Assistance Received for Selected Student Characteristics

SOURCE	DF	SQUARES	MEAN SQUARE	F	P	(%)
FAMILY INCOME						
Groups	5	9.57	1.91	.639	.670	0.5
Error	604	1807.82	2.99	---	---	
Total	609	1817.39	2.98	---	---	
COLLEGE						
Groups	6	12.44	2.07	.710	.641	0.6
Error	662	1933.27	2.92	---	---	
Total	668	1945.71	2.91	---	---	
COLLEGE CLASS						
Groups	3	5.60	1.87	.640	.589	0.3
Error	665	1937.06	2.91	---	---	
Total	668	1942.66	2.91	---	---	
EOF						
Groups	1	18.09	18.09	6.263	.013 *	0.9
Error	667	1927.62	2.89	---	---	
Total	668	1945.71	2.91	---	---	
GPA						
Groups	4	12.30	3.07	1.06	.376	0.6
Error	663	1924.41	2.91	---	---	
Total	667	1936.71	2.90	---	---	

TABLE 9-2 (Continued)

Analysis of Variance on Amount of Assistance Received for Selected Student Characteristics

SOURCE	DF	SQUARES	MEAN SQUARE	F	P	(%)
SAT - MATH						
Groups	4	51.56	12.94	4.583	.001*	3.1
Error	570	1608.84	2.82	---	---	
Total	574	1660.40	2.89	---	---	
SAT - VERBAL						
Groups	4	25.17	6.29	2.189	.069	1.5
Error	560	1610.19	2.88	---	---	
Total	564	1635.36	2.90	---	---	

*P < .05

Insert Table 10 here

Strong majorities of students indicated that other factors sometimes influenced their decision not to seek out institutional support services. Inconvenience in the time and location of services was frequently cited as discouraging. Furthermore, almost eight of ten undergraduates noted that sometimes they "Did not know where to get the help needed." Clearly ignorance, confusion and/or inadequate availability of services were obstacles to obtaining service. In addition more than seven out of ten respondents had some doubts about the usefulness of academic support services. Without comparative data it is hard to interpret this finding, but clearly many students lack confidence in the efficacy of existing services. Perhaps the most disturbing finding regarding reasons for not using university services was the fact that 44 percent sometimes did not seek help because they felt, "Some 'helpers' have bad attitudes toward students like myself." Thus, the perception of many students that service providers are biased must be noted (even though our survey data suggest help is equally available to all). In sum, there are many reasons why students did not use institutional support services. Although students' consider self-reliance to be the primary reason for not making greater use of institutional support programs, the survey also suggests that utilization would increase if systemic improvements were made.

How distinctive are EOF students?

Because the Educational Opportunity Fund is one of the biggest academic support programs, EOF students were singled out for a special analysis. Comparisons between EOF and non-EOF students are presented in Tables 11 and 12 below.

Insert Table 11 here

By looking at column A in Table 10 for both EOF and non-EOF students, it can be seen that EOF students were more likely than others to report unmet needs for assistance. However, Column B comparisons show that EOF students were also more likely than other students to have received assistance in eight of the nine problem areas. Help in using computers was received with the same frequency by both EOF and non-EOF students. The EOF edge over other students in receiving assistance was small in several areas. However, EOF students were almost three times as likely as others to get help in writing a paper and almost twice as likely to have gotten help in

TABLE 10

Reasons for Not Using Institutional Support Services (in percent)

Reason	All or Most of the Time	Some of the Time	Never	N
Decided to deal with the problem on my own.	79.8	18.4	1.8	693
Services were not at a convenient time.	27.8	51.2	21.0	693
Did not know where to get the help needed.	20.0	58.0	22.0	693
Reluctant to seek help.	24.2	48.3	27.5	693
Did not feel academic support services would be helpful.	24.2	46.6	29.1	693
The services were not conveniently located.	15.8	47.6	36.6	693
Some "helpers" have bad attitudes toward students like myself.	9.2	34.7	56.1	693

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TABLE 11

Help Needed and Received

EOF and NON-EOF Students
(in percent)

	EOF STUDENTS				NON-EOF STUDENTS				
Problem Area	A Would have liked Assistance	B Received Assistance	C No Assistance was Required	(N)	A Would have liked Assistance	B Received Assistance	C No Assistance was Required	(N)	Chi-Square
Making career choices	50.3	25.4	24.3	53	42.3	23.0	34.6	630	2.4
Using computers	33.1	33.7	33.1	53	31.0	33.7	35.3	636	0.1
Mastering the material in one or more specific courses	62.7	18.1	19.2	53	41.2	17.0	41.8	629	11.6*
Using the library	24.7	36.5	38.8	53	23.4	33.2	43.4	635	0.4
Coping with stress	52.3	10.8	36.9	53	38.0	6.3	55.7	632	7.2*
Solving mathematical problems	29.4	32.8	37.9	53	22.6	21.4	56.0	631	6.8*
Studying for tests	47.2	20.2	32.6	53	29.7	13.2	57.2	631	12.0*
Writing a paper	27.1	41.8	31.1	53	22.5	15.1	62.4	634	28.9*
Understanding readings	36.2	17.5	46.3	53	20.2	9.0	70.7	631	13.6*

* P < .05

understanding readings and studying for tests. EOF students are frequently channelled into Gateway courses and Writing Center programs, so the extra assistance they receive may come from these programs as well as direct EOF support services.

Insert Table 12 here

Table 12 shows that EOF students are like other students in their strong preference for friends over other sources of academic support. However, 36 percent of the students in EOF report that they very often use EOF services -- that being their second preference for help. Non-EOF students do not turn to any institutional support service in anything like those numbers. Furthermore, EOF students are more likely than others to use all of the other support services except the Learning Resource Centers (where their rate of frequent utilization was identical to that of other students). EOF students participated in formally organized study groups at about the same rate as other students. Relatives were the only source of assistance used less often by EOF students than others.

Interview Results

The Student's View

The main themes which emerged from the student interviews were: freshman reality shock and bewilderment; obstacles to finding help; avoiding developmental challenges; and equity concerns.

Reality Shock The students realized almost immediately that Rutgers University was vastly different from their high schools. Its scale and geographical dispersion of the facilities, the bus system, and the parking regulations were disorienting. But the impersonality of the university was far more daunting. In their dealings with both faculty and staff students often felt more like a number than a total human being. Classes were considered too large to permit meaningful discussion. One student explained, "I didn't feel like I was actually attending the school, because I wasn't really in classes. I was just sitting there listening." Multiple choice tests and limited opportunities for creativity

TABLE 12

Frequency of Use of Support Sources

EOF and NON-EOF Students

	EOF STUDENTS				NON-EOF STUDENTS			
Support Source	**Very Often**	**Sometimes**	**Never**	**N**	**Very Often**	**Sometimes**	**Never**	**N**
Friend	56.7	36.5	6.7	53	47.9	47.7	4.5	637
Informal study group	18.6	52.0	29.4	53	17.9	49.8	32.3	637
Relative	6.7	34.3	59.0	53	11.3	37.4	51.4	637
Professor	12.4	69.7	18.0	53	9.7	67.7	22.6	637
Teaching Assistant	12.4	68.4	19.2	53	6.6	69.0	24.4	636
Math/Science Learning Center	7.3	23.6	69.1	53	6.4	24.2	69.3	635
Learning Resource Center	5.1	39.9	55.1	53	5.1	31.2	63.7	636
Writing Center	14.6	31.5	53.9	53	4.1	12.1	83.9	637
Librarian	6.2	42.7	51.1	53	4.7	49.8	45.5	635
Computer Info Center	9.0	34.8	56.2	53	3.5	28.1	68.4	635
Formally organized peer study group	3.4	25.8	70.8	53	3.7	20.9	75.4	636
EOF program	36.0	45.5	18.5	53	0.8	2.5	96.7	634
College Dean/Counselor	11.8	40.4	47.8	53	1.8	27.8	70.4	637
Dept. Advisor	5.6	20.2	74.2	53	1.8	24.4	73.9	636
Gateway course instructor	2.8	17.6	79.5	53	0.2	1.8	98.0	634
Tutor that I paid myself	0.0	3.4	96.6	53	0.4	4.7	94.9	636
All other sources	25.0	8.3	67.7	12	9.0	7.1	84.0	156

alienated some. Professors often seemed distant, inaccessible and disinterested. Even a professor's vocabulary may intimidate some students, especially those who are the first in their family to attend college. One such student confided,

> The professor used top of the line dictionary words. I knew the words, but I wasn't used to hearing people talk like that. It made me feel like I didn't know enough.

The students stated that professors usually did not care whether or not you attended classes. They did not even bother to take attendance.

> I know it sounds horrible, but the professor is the last person to go to . . .[if you are confused]. A lot of my professors are condescending -- " I have all this schooling and you're just an undergraduate. I don't have to help you. That's what I have a TA for." A lot of professors don't even schedule office hours.

Another said, "I was used to knowing my teachers on a one-to-one basis, even going to their houses. To not know my teacher at all was very hard for me." When asked if faculty reach out to students, three students answered, "No way!" Other students were more charitable, indicating that at least some professors were welcoming, even though most were not.

Except for one student who recently immigrated from the former Soviet Union, the students interviewed found the academic demands of Rutgers much more rigorous and the academic competition much tougher than in their high schools. Many students at or near the top of their high school graduating classes suffered significant ego wounds. The following comments by different students are typical.

> In high school I got B's. Here I started getting C's. I never had a C in my life. I didn't like it.

> In high school if I had a homework assignment, I did that assignment. I read exactly what I had to read and no more. Here you've got to do all this reading on your own, nothing forcing you to get it done. That's when I realized I wasn't a good student.

> In high school I got around everything. Here at Rutgers I have to read the books. Here I am always reading the books, unfortunately.

The burden of freedom is a major part of the adjustment problem. Students quickly learn that they can spend their time as they want -- loafing, playing, partying, or studying. In order to survive or excel they must quickly learn how to manage their time well. "There's so much freedom. You can do whatever you want. The classes are so big, you don't have to go. Nobody will ever miss you," noted one student.

Seeking help Students often failed to get much help from the University, but this deficiency was not primarily due to a dearth of helpers. In major part the failure was due to student reluctance, ignorance and confusion.

Several admitted that they were reluctant to seek help, even though they realized they were in trouble. Sometimes their delay in seeking help was tied to pride and denial. One student summed up the point well:

> As a first year student, especially if you were at the top of your class, you don't want to admit that you can't do this by yourself. I knew it was okay to get help, but you just don't want to.

Others conceded that they could not quite believe that the poor results on early tests would be repeated without help, "Like an alcoholic, I was in denial." By delaying the students made their situation worse, of course.

Ignorance and confusion emerged as important obstacles to receiving help. The first year student is inundated with information about Rutgers. Although they are told about academic support systems -- academic advisors, the Learning Resource Centers, the Writing Center, the Math/Science Learning Center -- the students often do not assimilate the information. There are many different services and the students are confused about their eligibility for certain programs as well as about the kind and quality of services available. When the students were asked how they finally connected with support providers, they generally answered that they relied upon recommendations from friends. One student noted that the ubiquitous LRC posters made her aware that such centers existed, but she did not go there for help until a friend brought her. In another instance a student contacted her academic

advisor only after she had been reminded of the advising service by another student: "I love my advisor, but the only way I found out there were academic advisors was through word of mouth." Sociologists have found this to be a common phenomenon and have given it a name, the "two-step flow of communication."[1] The essential idea is that information flows first to opinion leaders and only then to less active and attuned members of the public. Several students commented that if their professor had made a point of referring them as individuals, or even the class as a whole, to one or another support program, they would have gone. But faculty referrals were rare.

Athletes and students benefitting from the Educational Opportunity Fund were distinctly advantaged with regard to knowledge of academic support services. Their counselors made specific and direct efforts to familiarize the students with sources of help and encouraged them to make full use of services available. They were exceptions to the general rule, which was ignorance and confusion regarding academic support services.

Avoiding developmental challenges Although many poorly prepared students come with high aspirations for business and professional careers, "Big dreams soon evaporate." When ill-prepared students are placed in remedial math and English courses they begin to question their dreams. Gateway courses provide the extra time and support necessary to get beyond the tough introductory level, but many of the students we interviewed were inclined to avoid further challenging courses in which their academic weaknesses would be severely tested. They decided to switch their prospective careers rather than fight to maintain their initial occupational goals by strengthening their skills. Rejecting the idea that tough courses are good for you, students who were weak in writing sought courses which required no papers while students with weak math skills avoided quantitative courses. One student remarked, "I don't want to take the required courses, because I know they will hurt my grade point average." Students eagerly sought to learn which were "killer" courses and which were "guts" -- information easily attained, usually from peers, but occasionally from counselors. High grades in easy courses balance off bad grades in unavoidable tough courses. For the weakest students survival, and ultimately graduation, are the issues, not acquiring new knowledge. When asked whether or not students seek the path of least resistance, the easiest way, through college, several students unashamedly admitted that they did. Such students valued the Rutgers degree as a ticket

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[1]Elihu Katz and Paul F. Lazarsfeld, *Personal Influence: The Part Played by People in the Flow of Mass Communications* (New York: The Free Press, 1955), 309.

to a good job, but failed to see any relationship between academic skills and job qualifications. They adopted what Becker[1] called a "GPA perspective" in which the search for "good" (variously defined) grades took precedence over strengthening basic academic skills or, more broadly, intellectual development.

Others put the issue somewhat differently. Their goal was not necessarily the easiest way, but a way which would provide an acceptable level of challenge and still allow a balance between the academic and social sides of academic life. For example, one young woman said she had started out as a science major, but found that in order to get A's she had to devote virtually all of her time to study, leaving her nervous and depressed. Once she switched to psychology she found an appropriate level of intellectual challenge. She worked hard, but had time to play as well. Another student stated:

> I don't take all the hard ones or I'll probably go crazy. But I have friends in the school of business or pre-med and they stay up all night working.

Several student respondents pointed out that undergraduates vary widely in the seriousness of their approach to academics. One large percentage is not very serious at all. They spend a lot of time partying and are content with mediocre grades. Others are extremely serious and willing to do whatever is necessary to succeed in their majors and subsequent careers.

> The Math/Science Learning Center tutor I had was very intimidating. I didn't like him at all. He made me feel really stupid. But I didn't care. I just kept asking all the questions I needed to have answered.

Two of the students interviewed were the children of recent immigrants, one Russian and one Chinese. Both of these students were very serious and determined to work hard in order to get the most out of their college opportunities.

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[1]Howard S. Becker, Blanche Geer and Everett C. Hughes, *Making the Grade: The Academic Side of College Life* (New York: John Wiley and Sons, 1968). See also Robert Parelius and William Berlin, "The Dynamics of Decline," *Change*, 16 (July/August, 1984, pp.12-17 and Michael Moffatt, *Coming of Age in New Jersey: College and American Culture* (New Brunswick: Rutgers University Press, 1989).

It is important to note that even students who generally seek easier courses sometimes really work hard to develop a basic skill. For example, one football player spoke with real pride and considerable passion about how his writing improved with the help of the Writing Center, "It's worth more than money. It's a real source of satisfaction when you have learned to write better."

The Issue of Fairness Most students felt that there were enough academic support services that anyone who really searched for them could find help. But they would have to be resourceful and persistent because help was not always easy to find.

The Learning Resource Centers were singled out as contributing to equity in that they served everyone who came for help. The equity problem the students saw with the LRCs was that they did not provide tutoring or help to students in the humanities and social sciences.

Many students were unaware of academic support programs targeted at narrow groups: those from economically disadvantaged families, minorities and athletes. But those who did know about those programs were sometimes envious and resentful, as was the young woman who complained, "EOF students got a two month orientation. I got one day." Another claimed:

> If you are a minority you get a letter from your advisor saying that you have a meeting set up. I find that offensive because I am paying the same as anyone else . . . My [Cuban] roommate's advisor even called her up when she ignored the letter about the meeting.

Others had heard about various advantages athletes had, including help with registration, special counselors and tutors, and were clearly envious. An athlete proclaimed, "We have the best support services because we have the money to pay for them." On the other hand athletes sometimes complained that many professors are somewhat hostile, or at least unhelpful, to them.

Provider Perspectives

Providers were in broad agreement on several basic themes: programmatic proliferation; elements of community; strain due to limited resources; and the frustration of student resistance.

Programmatic proliferation Students admitted to Rutgers University each fall vary widely in terms of their academic preparation for college. Although many are strong students who make the

transition from high school to college with ease, others, particularly those from inner-city schools where academic expectations and grading standards are often lax[1], have a very difficult first year. The support providers interviewed all agreed that every admitted student deserves a reasonable chance to succeed and graduate and that academic supports should be available to all who need them.

As has been noted previously, academic support programs have been instituted by the central administration, colleges, and certain departments and faculties. The great majority of these are small and narrowly targeted (i.e. Retention Biology, Methods of Inquiry for Engineers, and the Minority Mentor Program). Only a few programs -- Learning Resource Centers, the Educational Opportunity Fund, the Gateway program, and the Writing Centers -- aim to serve large segments of the undergraduate population.

An entrepreneurial and "laissez faire" climate exists on campus that encourages the search for outside funds for special projects. Administrators or faculty members are urged to pursue their interests by developing proposals and securing outside funding. Further, as one respondent observed:

> If it's grant funded, you can do what you want. It's hard to say, "You cannot do this," if it's not costing us anything.

New programs are introduced when funding is secured, not as the result of a systematic plan for the academic support system as a whole. Programmatic proliferation is further spurred by the fact that outside agencies generally provide funds for innovative projects, rather than continuing support for existing ones. Over time academic support programs have multiplied, each with its own goals, target population, eligibility requirements, services, and vision of how best to help needy students. New programs are superimposed upon established ones without prior consideration of such potential problems as duplication of services, competition for clients, setting and maintaining boundaries between programs, and inequities either in access to support services or in the quality of help available. Communication between all interested parties is difficult and incomplete. Thus working relationships among established and innovative programs develop slowly and in an ad hoc manner. This creates a degree of confusion among providers, "It's hard to know where is the best place to send students who need help." Many feel that the present academic support network has too much duplication, too little coordination and too little quality control. Indeed, several providers were quite critical of the system, referring to it as "splintered," " failing rather badly," and allowing many students "to fall through the cracks."

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[1]Judith Anderson, "What Do Student Grades Mean? Differences Across Schools," *Research Report* (Washington, D.C.: Office of Research of the United States Department of Education, 1-4).

The academic support system is a fine example of what sociologists call a loosely coupled system. In such a system programs are at least somewhat or slowly responsive to one another, yet each "preserves its own identity and some evidence of its physical or logical separateness."[1] Under these circumstances it is hardly surprising that there is no consensus within the academic support network as to how scarce resources and authority should be distributed. Most providers feel there must be a better way. Many suggested that if the right individual was given the job of promoting communication, coordination, cooperation and evaluation within the system, better services could be provided with existing resources.

Elements of community Providers of support services share certain values and beliefs. They are motivated by a common desire to help students survive and succeed in a tough and competitive academic environment. They believe that Rutgers should remain an open, rather than an elitist, institution. Further they believe it should be a supportive academy, not one governed by the principles of Social Darwinism.[2] They believe that Rutgers can, and should, serve as a ladder of social mobility for students, especially those from notoriously inadequate urban high schools. Finally, they recognize that these values and beliefs are "precarious,"[3] that they are contested by important segments of the academic community. Many professors, and some administrators, would prefer that Rutgers admit only the cream of the crop and retain only those who are sufficiently determined, resilient, and resourceful to survive rigorous academic competition. One individual's skepticism and perhaps resentment was revealed in the comment, "I wasn't aware of so many services when I was a student." Providers believe that many administrators and professors at Rutgers doubt the efficacy of remedial and developmental education beyond high school, and, furthermore, that such individuals would like to eliminate remedial and developmental programs in this university. In the face of a skeptical and somewhat hostile environment, members of the academic support community generally try to support one another. Thus, consensus among support providers combines with a sense of external threat to promote a community of interest.

Several providers noted that the regular monthly meetings of the Advisory Council on Developmental Education help build solidarity. These meetings provide a context within which

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[1]Karl Weick, "Educational Organizations as Loosely-Coupled Systems," *Administrative Science Quarterly*, 21 (1), 1976, p.3. See also R. Parelius, "Remediation in a Research University: An Organizational Analysis," *Journal of the Freshman Year Experience*, 5 (2), 1993, pp. 91-105.

[2]Social Darwinism refers to the idea that "survival of the fittest" ought to apply in social life, not just in the biological realm. See Robert Parelius, "Remediation in a Research University," 93-94.

[3]Burton R. Clark, "Organizational Adaptation and Precarious Values," *American Sociological Review*, 21 (1956), 327-336.

administrators, faculty, and staff members representing the biggest programs such as the Educational Opportunity Fund, the Learning Resource Centers, and the Gateway programs come together to discuss common problems. These meetings foster the development of trust and cooperation. "You come to recognize that everyone is there for the right reasons, to help the students," observed one long-time ACDE member. The mutual trust and respect has made possible a number of joint efforts including joint authorship, contributions by one set of programs to support activities of another, and hiring individuals from one program to provide services within the context of another.

However, it would be misleading to suggest that the academic support community is highly cohesive. In the course of normal daily routine, administrators come in frequent contact and develop close working relationships. The same is true for those in the college EOF programs and the departmental Gateway programs. But there is relatively little cross-program contact and cooperation. Although ACDE brings many program representatives together, it generally does not attempt to promote programmatic coordination or long-range cooperative planning. Generally, the various programs operate on a live and let live basis, focussing almost exclusively on their own business. Again the fact that significant segments of the academic community are critical of the academic support network does not help. As one observer noted, "Cooperation and sharing would be easier if all felt secure and valued."

Fiscal cutbacks strain relations For several years now Rutgers University as a whole has been experiencing hard times. Internally funded support services such as the Gateway program and the Math/Science Learning Center have experienced budgetary cutbacks. At the same time a major and expensive new initiative has been launched in the form of Learning Resource Centers. Rightly or wrongly many view the fiscal situation as being a zero-sum game: if you win, I lose. Under the pressure of declining financial support, the norms of civility and mutual respect are eroding, lamented one program administrator.

> There shouldn't be this feeling that I have to protect my own interest. I think everyone feels that way whether or not they admit it.

Charges of administrative top-heaviness, inefficiency, inadequate quality control, excessive tutor involvement in student writing projects (to the point that true authorship is uncertain), and counselors who advise students to take easy courses and avoid challenging ones were heard with disturbing frequency. Fiscal tightness is also prompting calls for more and better evaluation and for channelling scarce resources away from less effective programs toward more effective ones. The fundamental norm of tolerance, "Live and let live," is breaking down under financial pressure.

Student resistance Providers confirm student reports of reality shock upon entering Rutgers. Many entering students, especially students from inner-city high schools, have a very rough time during their first year. Students who are used to being at or near the top of their high school class often initially deny that they need help. Slow recognition of the need for serious remediation or development is common. Despite the fact that they are often desperately in need of help, a small, but significant, proportion of students display various forms of resistance to academic support service providers. They miss appointments and generally avoid contact. They resent assignment to remedial math or English. At least initially, such students are unhappy with being placed in Gateway courses. Even referrals to the Learning Resource Centers or the Writing Center are resisted and resented. Students such as these often test professors' and counselors' authority, and if they comply it is often in a half-hearted way. The students most in need of quick help are often those who procrastinate -- in handing in administrative forms, completing class assignments, and joining student study groups. When they come to class or to tutoring sessions, they are often unprepared. Sometimes they disrupt class in minor ways. Such students often have unrealistic expectations that a parent-figure will intervene on their behalf, and refuse to accept personal responsibility for their own survival. One provider confided,

> Sometimes it seems we care more than the student. I sometimes think we may be killing them with kindness.

Another attributed resistance to adolescent immaturity and suggested that most students, not just those in academic trouble, should stop out of education for a year or two between high school and college. It would give them time to think about why they are attending college and to accept responsibility for their own success or failure. Resistant students are a trial to support providers, and the temptation to give up on them always exists, but one dedicated provider said, "I try not to give up on any of them. If I turn my back, who will help her?"

One, but only one, provider suggested that student resistance might be rooted in the provider's behavior:

> No student here wants to flunk out. Resistance, in my experience, is usually due to provider attitudes. Providers are sometimes patronizing or abrasive.

The significance of this insight is underscored by the positive responses of substantial numbers of students who agreed with the survey item: "Some 'helpers' have bad attitudes toward students like myself."

Faculty indifference Academic support providers are frequently frustrated by faculty indifference. The fundamental problem as they see it is that relatively few faculty members understand their teaching in developmental terms.

> It all starts with the professor. All the rest of us are just trying to pick up the pieces. There is a certain lack of awareness, especially among the sciences.

Professors are generally not trained as teachers. Furthermore, many see themselves as gatekeepers, allowing only the most qualified to pass, rather than as mentors or coaches whose job is to assure that all their students master the course material. Counselors frequently hear that faculty members are unconcerned with student difficulties. Several providers expressed the wish that professors were more aware of the services available to their students and were more active in referring students to those services. It appears that many professors are confused by the variety of support programs and are uncertain when and where to refer students. When faculty are asked to cooperate in support efforts, the response is spotty. Some individual professors and departments are helpful, others don't respond, and still others are hostile. Still, as one experienced administrator noted a substantial minority of professors do have a developmental perspective, "It's amazing that so many do care given the University reward system [which rewards research but not teaching]." It should be noted, of course, that under President Lawrence a university-wide effort has been made to emphasize quality undergraduate teaching.

Conclusions

This project was designed to assess academic support needs on the New Brunswick campus of Rutgers University. The data indicate not only that students need a great deal of help of various kinds, but also that students frequently do not find the help they need. Furthermore, when undergraduates look for assistance, they turn to those they know best, their friends (or, in some cases, relatives). The help of professors and teaching assistants is sought much less frequently. For the overwhelming majority of students, formal institutionally provided academic support services are a third choice. However, students in the Educational Opportunity Fund are exceptional in that they do utilize EOF services frequently.

The survey shows that virtually all students feel the need for assistance. Although

academically needy students come from all social backgounds, students with low SAT scores, minorities, and those from low-income families clearly have greater needs than others. The data also indicate that the relationships between student background characteristics and actually receiving help are either nonexistant or very weak.

Why don't students take greater advantage of the formal academic assistance programs? They say that they prefer to try to solve their problems on their own. But both the survey and interview data indicate that students are often confused about where to get the help they need. Students also assert that services are often unavailable when and where they are needed. Substantial numbers of students expressed doubts about the quality of services offered and about the degree to which services are dispensed in an evenhanded manner. Interviews with both students and support service providers highlight the existence of complex organizational and developmental barriers to greater student utilization of existing services.

It is clear that students often do get the assistance they need: from friends; from professors and teaching assistants; and from formal academic support services. However, virtually everyone involved believes that the existing academic support system can, and should, be improved. Many providers believe that positive changes are possible, even though resources are limited. But ASNAP data do not provide guidelines for reforming and strengthening the academic support system. In order for progress to be made it will be necessary for students, professors, administrators, and service providers to work together. They must try to reach agreement as to what are the strengths and weaknesses of the existing system, what an ideal system might look like, and what concrete steps can be taken to move the system we have toward the system we would like to have. A total quality management approach to accomplish these ends is sketched in Appendix C: Connecting Academic Support Services at Rutgers University -- a Proposal to the Fund for the Improvement of Post-secondary Education. It will be difficult to redefine roles, share and/or reallocate program resources, and mount new initiatives in order to refine support services. But the Academic Support Needs Assessment Project has shown both that there is a substantial amount of unmet student need for assistance and that service providers have the commitment necessary to transform a good system into much stronger one.

Appendix A

ASNAP Survey Instrument

THE STATE UNIVERSITY OF NEW JERSEY

RUTGERS

SURVEY OF ACADEMIC SUPPORT NEEDS

OFFICE OF ACADEMIC PLANNING
AND INSTITUTIONAL RESEARCH
Geology Hall
New Brunswick, NJ 08903
(908) 932-7305

Rutgers University is conducting this survey in an effort to determine the extent to which students are aware of and using the academic support services that the University provides. Please take a few moments to complete this questionnaire as accurately and as honestly as possible. When you are finished, please return the questionnaire to the Office of Academic Planning and Institutional Research in the enclosed pre-addressed envelope. Thank you!

Need For and Use of Rutgers Academic Support Services

1) Listed below are some activities with which students in college commonly have problems. For each of the activities listed, please indicate if you received assistance, would have liked assistance, or if assistance was unnecessary during this school year (September, 1993 - Present). *(Circle one number for each activity.)*

	ASSISTANCE WAS NOT NECESSARY	WOULD HAVE LIKED ASSISTANCE	RECEIVED ASSISTANCE
1 Writing a paper	1	2	3
2 Solving mathematical problems	1	2	3
3 Studying for tests	1	2	3
4 Coping with stress	1	2	3
5 Understanding assigned readings	1	2	3
6 Using the library	1	2	3
7 Making career choices	1	2	3
8 Mastering the material in one or more specific courses	1	2	3
9 Using computers	1	2	3

2) Rutgers University provides a wide variety of academic services to help students with their studies, yet not all students take advantage of these services. Listed below are some reasons why students do not use these services. For each of the reasons listed, please indicate **how often** that reason has applied to you during times when you could have used help with your studies but did not take advantage of any of the services that Rutgers offers. *(Circle one number for each statement.)*

	NEVER	SOME OF THE TIME	MOST OF THE TIME	ALL OF THE TIME
1 I did not know where to get the help I needed.	1	2	3	4
2 I decided to try to deal with the problem on my own.	1	2	3	4
3 The services were not provided at a convenient time.	1	2	3	4
4 I was reluctant to seek help from the sources available.	1	2	3	4
5 I did not feel that the academic support services available to me would be helpful.	1	2	3	4
6 The services were not conveniently located.	1	2	3	4
7 Some "helpers" have bad attitudes toward students like myself.	1	2	3	4

Sources and Quality of Academic Support

3) Listed below are potential sources of assistance for students who need help with their studies. Please indicate how often you go to each of the sources listed by circling the appropriate corresponding response. *(Circle one number for each source listed.)*

		NEVER	SOMETIMES	VERY OFTEN
1	Friend	1	2	3
2	Relative	1	2	3
3	Teaching Assistant	1	2	3
4	Professor	1	2	3
5	Departmental advisor	1	2	3
6	College dean or counselor	1	2	3
7	Learning Resource Center	1	2	3
8	EOF program	1	2	3
9	Gateway course instructor	1	2	3
10	Writing Center	1	2	3
11	Computer Information Center	1	2	3
12	Formally organized peer study group	1	2	3
13	Librarian	1	2	3
14	Math/Science Learning Center	1	2	3
15	A study group formed by classmates	1	2	3
16	A tutor that I paid myself	1	2	3
17	Other *(Specify_____)*	1	2	3

4) From the above list of sources of academic support, please select the three sources that have been most **helpful** to you at times when you have needed assistance with your studies here at Rutgers. *(Put the numbers to the left of the above items in the appropriate boxes below.)*

☐ SOURCE OF SUPPORT THAT WAS MOST HELPFUL

☐ SOURCE OF SUPPORT THAT WAS NEXT MOST HELPFUL

☐ SOURCE OF SUPPORT THAT WAS THIRD MOST HELPFUL

5) From the above list of sources of academic support, please select the source **you have used** that was **least helpful** to you when you needed assistance with your studies here at Rutgers. *(Put the number of the item in the box below.)*

☐ SOURCE OF SUPPORT THAT WAS LEAST HELPFUL

Time Budget

6) The time demands faced by students vary widely and can influence their academic success. During a typical week, approximately how many hours do you spend each week doing the following activities? *(Circle one number for each activity.)*

	NONE	1 - 5 HOURS	6 - 10 HOURS	11 - 19 HOURS	20 - 29 HOURS	30 - 39 HOURS	40 HOURS OR MORE
1 Working at a job on campus	0	1	2	3	4	5	6
2 Working at a job off campus	0	1	2	3	4	5	6
3 Doing homework, studying for exams, and doing other course-related activities outside of class	0	1	2	3	4	5	6
4 Participating in sports, going to the gym, and doing other sorts of recreational/fitness activities	0	1	2	3	4	5	6
5 Participating in extracurricular activities other than sports or fitness	0	1	2	3	4	5	6
6 Family responsibilities and activities	0	1	2	3	4	5	6

All About You

7) If you could continue with your education **as far as you wanted**, what is the highest degree you would seek? *(Circle one.)*

1 I WOULD QUIT BEFORE EARNING A BACHELOR'S DEGREE
2 BACHELOR'S DEGREE (e.g., B.A., B.S.)
3 MASTER'S DEGREE (e.g., M.A., M.B.A.)
4 DOCTORAL OR PROFESSIONAL DEGREE (e.g., Ph.D., M.D.)

8) Realistically, what do you believe will be the highest degree you will attain? *(Circle one.)*

1 I WILL NOT RECEIVE A COLLEGE DEGREE
2 ASSOCIATE'S DEGREE (e.g., A.A.)
3 BACHELOR'S DEGREE (e.g., B.A., B.S.)
4 MASTER'S DEGREE (e.g., M.A., M.B.A.)
5 DOCTORAL OR PROFESSIONAL DEGREE (e.g., Ph.D., M.D.)

9) What occupation would you like to have 20 years from now?

_____

BEST COPY AVAILABLE

10) How important is each of the following to you in your life? *(Circle one number for each statement.)*

		NOT IMPORTANT	SOMEWHAT IMPORTANT	VERY IMPORTANT
1	Being successful in my line of work	1	2	3
2	Having lots of money	1	2	3
3	Having strong friendships	1	2	3
4	Being able to find steady work	1	2	3
5	Being a leader in my community	1	2	3
6	Being able to give my children better opportunities than I have had	1	2	3
7	Living close to parents and relatives	1	2	3
8	Working to correct social and economic inequalities	1	2	3

11) Since you have been at Rutgers, how often have your professors shown a personal interest in you **as a student**? *(Circle one.)*

1 NEVER
2 RARELY
3 OCCASIONALLY
4 FREQUENTLY

12) What is the highest level of education completed by your father? *(Circle one.)*

1 ELEMENTARY SCHOOL OR MIDDLE SCHOOL
2 HIGH SCHOOL
3 SOME COLLEGE
4 COLLEGE GRADUATE
5 GRADUATE OR PROFESSIONAL SCHOOL

13) What is the highest level of education completed by your mother? *(Circle one.)*

1 ELEMENTARY SCHOOL OR MIDDLE SCHOOL
2 HIGH SCHOOL
3 SOME COLLEGE
4 COLLEGE GRADUATE
5 GRADUATE OR PROFESSIONAL SCHOOL

14) What religion do you consider yourself to be? *(Write your religion on the line below and please be as specific as possible [for example, "Methodist," "Baptist," "Roman Catholic," "Reformed Jewish," "Orthodox Jewish," "Muslim," etc.]. If you do not consider yourself to have any religion, write "None.")*

_____

15) What is your **best estimate** of your parents' (or guardians') total income last year? (If you are independent, what is your best estimate of your total household income?) (Please consider income from all sources before taxes.) *(Circle one.)*

1 LESS THAN $6,000
2 $6,000 - $9,999
3 $10,000 - $14,999
4 $15,000 - $19,999
5 $20,000 - $24,999
6 $25,000 - $29,999
7 $30,000 - $39,999
8 $40,000 - $49,999
9 $50,000 - $59,999
10 $60,000 - $74,999
11 $75,000 - $99,999
12 $100,000 - $149,999
13 $150,000 - $199,999
14 $200,000 OR MORE

16) Please use the space below to make any comments that you would like about the academic support services here at Rutgers. In particular, perhaps you would like to elaborate on what you answered in Questions 4 and 5 by explaining why certain sources were helpful and others were not.

_____

_____

_____

_____

_____

_____

_____

_____

_____

Thank you for completing this survey; your participation is greatly appreciated. Please place your completed questionnaire in the enclosed pre-addressed envelope and then return it to the Office of Academic Planning and Institutional Research via Campus Mail. Thank you once again and good luck with your studies!

Appendix B

Student and Provider Interview Schedules

Student Interview Schedule

You have been asked to participate in a study of academic support needs here on the New Brunswick campus. A random sample of 2,000 students has been sent a questionnaire on the topic, but we feel it is essential to speak directly to some students like yourself. Interviews often help to make sense out of survey data.

- To begin would you please tell me something about yourself and what brought you to Rutgers?

- To date are you happy with your experience as a Rutgers student?

  Probe: Please explain. Why or why not?

- Before you actually entered Rutgers, what kind of a student did you consider yourself to be (good, bad, indifferent)?

  After being enrolled here for some time, has that self-conception changed?

  Probe: If so, how and why? If not why not?

- We would like to know more about student reactions to remedial courses offered here at Rutgers.

  As a result of placement test results, did you have to enroll in a remedial mathematics course?

  Probe: Did that surprise you? Why or why not?

  Probe: Do you resent the fact that you had to enroll in such a course?

  If "yes" did that resentment affect your performance in that course? How?

- As a result of placement test results, did you have to enroll in a remedial writing course?

  Probe: Did that surprise you? Why or why not?

  Probe: Do you resent the fact that you had to enroll in such a course?

  If "yes" did that resentment affect your performance in that course? How?

- We are interested in finding out how Rutgers University students view the academic demands they face and the ways in which they deal with those demands.

First, how difficult have you found Rutgers University to be?

Probe: Why do you think it has been easy/medium/hard for you?

Probe: Do you think that you were well prepared by your high school (previous college) for success here at Rutgers? Why or why not?

- What are your greatest academic strengths?

Probe: Since you have been here at Rutgers, what have you, yourself, done to increase those strengths?

Probe: How have your university experiences helped increase those strengths? [If university experiences have not helped, why not?]

- What are your most serious academic weaknesses?

Probe: Since you have been here at Rutgers, what have you, yourself, done to overcome those weaknesses?

Probe: How have your university experiences helped you overcome those weaknesses? [If university experiences have not helped, why not?]

- Do you think Rutgers students are really serious students?

Probe: What percentage actively seek out academic challenges?

Probe: What percentage work hard to overcome deficiencies and weaknesses?

Probe: What percentage seeks the path of least resistance, the easiest route to a degree?

- We think what at one time or another virtually all Rutgers University students feel that they could use some help with the academic demands that they face.

  Is that true of you? Were there times when you really could have used some help?

Probe: What were the circumstances?

Probe: What kinds of help did you need?

Probe: Did you seek help with the problem? [If not, why not?]

Probe: Where or from whom did you seek help?

Probe: Did you receive all the help you wanted or needed?

- How much responsibility do you think Rutgers University has to provide students with a strong academic support system?

- Did you ever want help, but not know where to get it? Please explain.

- Did you ever seek help, but receive contradictory advice from different sources? Please explain the circumstances.

- Did you ever seek aid, but find the help provided to be unsatisfactory? Please tell me about the case.

- Students do not always agree with official assessments of their academic deficiencies. Have you ever been told that you needed some form of special academic help when you felt it was unnecessary?

  Probe: When and why did that happen?

  Probe: How did you react to that situation?

  Probe: In the end did you resist or cooperate with the "unnecessary" support efforts?

- Do you think the Rutgers University academic support system is fair and equitable?

  Probe: Why or why not?

  If a student really needs academic help, what do you think is the best source of that help?

  Probe: Why?

- We are curious about how students view the balance between academics and the social life here at Rutgers.

  Do you think there is a good balance between academic and social affairs here at Rutgers?

  Probe: Why or why not?

  Which students work the hardest?

  Probe: Why?

  Which students work the least?

  Probe: Why?

- In conclusion what do you think can and should be done to make Rutgers more supportive of the academic growth of undergraduates?

Support Provider Interview

As you probably know by now this ASNAP project is primarily concerned with getting the students' views of academic support system needs. But it is vitally important to get some idea of the system from the support providers point of view. That is why I have asked to have this conversation with you.

- Tell me about the academic support services you (your program) provides.

- How much responsibility do you think Rutgers University has to provide students with a strong academic support system?

  Probe: Why?

  Probe: Given the prevailing extreme scarcity of resources which, do you think more money should be spent on our academic support system? Why or why not?

  Probe: Are you satisfied with the strength of Rutgers University's commitment to meeting the needs of underprepared students? Why or why not?

- Do you think Rutgers should do whatever it can to limit the number of admitted students who require remedial and/or developmental support services in order to graduate?

  Probe: Why or why not?

- Do you ever encounter student resistance to your efforts to help them?

  Probe: How frequently and under what circumstances does that generally happen?

  Probe: How much success have you had in overcoming student resistance?

  Probe: How do you explain such resistance?

- Do you feel part of an academic support community, a group of concerned and committed academic support service providers who cooperate with one another on behalf of the students?

  Probe: Why or why not?

  Probe: What do you think could be done to strengthen that community?

- What are the greatest strengths of our present academic support system?

  Probe: How could it be strengthened still further?

- What are the greatest weaknesses of our present academic support system?

  Probe: How might they be overcome?

  Probe: How might the system be made more efficient?

  Probe: Do you see evidence of competition among academic support programs? Please explain.

  Probe: Do you see evidence of conflict among academic support programs? Please explain.

  Probe: Do you see evidence of duplication of academic support services? Please explain.

  Probe: Do you see evidence of confusion among academic support services? Please explain.

Appendix C

Connecting Academic Support Services at Rutgers University

Proposal Submitted to the Fund for the Improvement of Post-Secondary Education

October 1994

Connecting Academic Support Services at Rutgers University

Support is being sought for an effort (Connecting Academic Support Services, hereafter CASS) to improve the efficiency and effectiveness of the university's academic support system. This system is comprised of 56 distinct retention and advancement programs.[1] The existence of so many disparate programs creates a significant amount of confusion, duplication of effort, and underutilization of scarce resources. The CASS project will encourage communication and cooperation among those who have a major interest in the academic support system: undergraduate students, support providers, administrators, and faculty. Specifically, this project will accomplish the following:

- Engage the full range of interested parties in an effort to define the strengths and weaknesses of the existing support system.
- Develop consensus about the characteristics of an *ideal* support system.
- Identify specific, concrete projects to strengthen the present system.
- Institute an internal grants program to support cooperative efforts.
- Stimulate the search for external funds to support cooperative efforts.
- Document and evaluate efforts to improve the support system.

Problem statement

Rutgers University works hard to provide every admitted student a fair chance to succeed academically and so graduate from the University. As the flagship State University of New Jersey, Rutgers admits promising graduates from high school throughout the state. Many first year students are well prepared and move easily from high school to college. But others, especially those from inner-city schools, find the transition difficult and require a certain amount

of remedial or developmental help to adjust and succeed. Over time major organizational units of the university, including the Faculty of Arts and Sciences, individual academic departments, undergraduate colleges and professional schools, and the central administration, have established their own academic support programs. These diverse projects have been instituted in an opportunistic fashion, taking advantage of both internal and external funding opportunities when they have appeared. Because the programs are administered by semi-autonomous organizational units and no one individual actively oversees the entire set of support programs, systemic issues have received little attention. Now, as a result of an extended period of fiscal constriction, there is widespread appreciation of the need to do more with less and of the potential benefits to be derived from greater coordination, cooperation, and resource sharing. However, without a careful and concerted new initiative like CASS, the discrete elements of the academic support system are likely to remain disconnected, less than maximally effective, and vulnerable to cutbacks.

Groundwork for the Present Project

The Academic Support Needs Assessment Project (ASNAP) was undertaken during the 1993-94 academic year.[2] A questionnaire was distributed to a random sample of 1,100 undergraduates on the New Brunswick campus of Rutgers University during Spring semester 1994, and a satisfactory response rate of 62 percent achieved. The survey gathered information about the need for and use of Rutgers' academic support services, reasons why students in need did not use available services, sources and quality of services provided, and various social background and attitudinal issues. Information from an administrative data base supplemented the survey data. In order to supplement and enrich the survey data, semi-structured interviews were

conducted with twenty undergraduates and seventeen support service providers.

The ASNAP survey and interviews documented the following facts about students: (1) virtually all students require some sort of help; (2) first year students are often bewildered and confused about where they can find the assistance they need; (3) although many find aid, many others do not; (4) help is generally sought from friends or relatives, rather than institutional sources; and (5) the need for academic help is closely tied to SAT scores: the lower the scores, the greater the need for support. ASNAP survey data provide benchmarks against which the progress associated with this project can be measured quantitatively.

The ASNAP interviews with service providers yielded other important information.[3] Providers are keenly aware of the precariousness of academic support services within the context of a research university. Many professors and administrators would prefer that Rutgers University admit and retain only the strongest students, those who do not require help. Such individuals believe that if weak students must be admitted, it is appropriate that only the fittest of them -- the brightest, most resourceful and resilient -- survive. From this Social Darwinist point of view extensive academic support services are unnecessary and possibly counterproductive. Despite, or perhaps because of, the somewhat hostile environment, elements of community have developed among those who provide academic support services. They know one another both because their daily work activities bring them into regular contact and because they attend the monthly meetings of the Advisory Committee on Developmental Education. Service providers also share certain values, beliefs and motivations. They believe Rutgers should serve as a ladder of social mobility and that relatively weak students should be provided with a reasonable amount of help. Because of these shared orientations, trust, as well as some cooperative efforts, already exist between individuals involved in different support programs.

Project Activities

CASS will guide participants through a critical examination of the present system and a process designed to develop consensus about what an ideal system would look like. Then grants will be made to encourage projects which will bring the existing system closer to the ideal.

Fall 1995 Examining the existing system Key stakeholder focus groups will critique the existing system each from their particular point of view. Professors, administrators, students and representatives of key service programs will analyze the present system's strengths and weaknesses and report on their deliberations.

January-March 1996 Generating consensus and commitment to change Committees consisting of representatives of stakeholders will meet and attempt to reach consensus about the characteristics of an *ideal* support system, quite apart from that which presently exists. In March a conference will be held to accomplish two major goals: (1) Identify means by which the gap between the ideal and real support systems could be narrowed and (2) develop guidelines for an internal grants program to support innovative projects. The internal grants program will stress the need for greater coordination and integration of services, cooperative planning, and sharing of resources.

April-June 1996 Initiating change A request for proposals will be distributed to all parties. Proposals will be reviewed and grants awarded. At the same time efforts will be made to identify external sources of funding and so encourage stakeholders to seek external funding.

Summer 1966/Spring 1997 Implementing change Internally funded projects will begin as will the search for external funds in support of other projects.

Spring/Summer 1997 Evaluation and writing final report The 1994 Academic Support Needs Assessment Project will be replicated, allowing for direct comparisons of student responses before and after the project period. Other evaluative criteria will be the number of internally funded projects initiated, the number of externally funded projects initiated, and the number of individuals involved in new projects.

Implications

The process utilized in this project can serve as a model for other large universities. Our problems of programmatic proliferation and isolation are common. Furthermore, pressures to find ways to do more with less are also widespread. The project will demonstrate a means by which new initiatives promoting cooperation, resource sharing, and increased effectiveness can be generated.

There are good reasons to expect full cooperation with CASS within the university. It has the support of the Advisory Committee on Developmental Education (which includes representatives from all major programs) and the Dean of the Faculty of Arts and Sciences. Furthermore, and perhaps more importantly, interviews conducted as part of the ASNAP project clearly indicate that service providers are frustrated by the current state of affairs and open to new ideas which would strengthen the overall academic support system.

Notes

1. Richard A. Nurse, et. al., draft report, *Guide to Undergraduate Retention and Advancement Programs*, (New Brunswick, NJ: Rutgers, the State University of New Jersey, 1994).

2. Robert J. Parelius, *Toward a More Helpful University: The Academic Support Needs Assessment Project*, September 1994, in press.

3. Gail A. Kluepfel, Robert J. Parelius and Godfrey Roberts, "Involving Faculty in Retention," *Journal of Developmental Education 17, 3 (Spring 1994), 16-27.* Robert J. Parelius, "Sociology and Survival 101," *Teaching Sociology*, 20 (April 1992), 154-57; Robert J. Parelius, "Remediation in a Research University: An Organizational Analysis," *Journal of the Freshman Year Experience*, 5, 2 (1993), 91-105.